

44. (New) The memory system as in Claim 43, wherein each of the plurality of T-RAM cells further comprises a transfer gate portion.

45. (New) The memory system as in Claim 44, wherein each of the transfer gate portions of the plurality of T-RAM cells comprise a halo region of a single polarity.

a1  
46. (New) The memory system as in Claim 45, wherein the single polarity halo region of the transfer gate portions of each of the plurality of T-RAM cells is fabricated in the same steps as one of the halo regions of the thyristor portion.

47. (New) The memory system as in Claim 43, wherein the plurality of T-RAM cells have a planar cell structure.

48. (New) The memory system as in Claim 43, wherein each of the plurality of T-RAM cells have at least one support device associated therewith.

49. (New) The memory system as in Claim 48, wherein the at least one support device associated with each of the plurality of T-RAM cells is fabricated simultaneously with fabrication steps for fabrication of the T-RAM cells.

50. (New) The memory system as in Claim 48, wherein each of the plurality of T-RAM cells has a first support device and a second support device associated therewith.

51. (New) The memory system as in Claim 50, wherein the first support device is a p-MOS support device and the second support device is an n-MOS support device.

52. (New) The memory system as in Claim 51, wherein the p-MOS support device comprises an n-type halo region and the n-MOS support device comprises a p-type halo region.

53. (New) The memory system as in Claim 52, wherein the n-type halo region of the p-MOS support device is fabricated simultaneously with fabrication steps for fabrication of one of the halo regions of the T-RAM cells and the p-type halo region of the n-MOS support device is fabricated simultaneously with fabrication steps for fabrication of the other halo region of the T-RAM cells.

54. (New) The memory system as in Claim 43, wherein the two halo regions of the T-RAM cells having different polarities form a contiguous halo region having two portions with different polarities.

55. (New) The memory system as in Claim 43, wherein each of the halo regions having different polarities is adjacent to a respective source/drain region associated the thyristor, the polarity of each source/drain region being opposite that of the adjacent halo region.

56. (New) A method for fabricating a multiplicity of T-RAM cells in an array on a semiconductor wafer, the method comprising:

fabricating a plurality of T-RAM cells, each T-RAM cell comprising a thyristor portion, the fabrication of the thyristor portion of each T-RAM cell including creating a first halo region of a first polarity type and a second halo region of a second polarity type.

57. (New) The method as in Claim 56, wherein the first halo region and the second halo region are created to form one contiguous halo region for the thyristor portion.

58. (New) The method as in Claim 56, wherein creating the first halo region comprises providing a first mask to the thyristor portion of each T-RAM cell, the first mask covering a second portion of the thyristor portion and leaving a first portion of the thyristor portion unmasked, and providing a halo implant of the first polarity type to the

first portion of the thyristor portion of each T-RAM cell, the first portion corresponding at least in part to the first halo region.

59. (New) The method as in Claim 58, wherein, prior to providing the halo implant of the first polarity type to the first portion, an extension implant of the second polarity type is provided to the first portion.

60. (New) The method as in Claim 58, wherein the first mask further leaves a transfer gate portion of each of the plurality of T-RAM cells unmasked, the halo implant of the first polarity type also being provided to the entire transfer gate portion of each of the plurality of T-RAM cells.

61. (New) The method as in Claim 58, wherein creating the second halo region comprises providing a second mask to the thyristor portion of each T-RAM cell, the second mask covering the first portion of the thyristor portion and leaving the second portion of the thyristor portion unmasked, and providing a halo implant of the second polarity type to the second portion of the thyristor portion of each T-RAM cell, the second portion corresponding at least in part to the second halo region.

62. (New) The method as in Claim 61, wherein, prior to providing the halo implant of the second polarity type to the second portion, an extension implant of the first polarity type is provided to the second portion.

63. (New) The method as in Claim 61, wherein creating the second halo region further comprises a second providing of the second mask to the thyristor portion of each T-RAM cell, the second mask again covering the first portion of the thyristor portion and leaving the second portion of the thyristor portion unmasked, and providing an implant of the first polarity type to the second portion of the thyristor portion of each T-RAM cell, the second halo region being formed upon application of the implant of the first polarity type.